

REMARKS

Applicants request favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Background

The claims now pending in the application are claims 1-22, with claims 1, 2, 3, 7, 8, 9, 13, 14, 17, and 20 being independent. By this Amendment, claims 1, 2, 3, 7, 8, 9, 13, 14, 17, and 20 have been amended. In particular, claims 2, 3, 8, and 9 have been amended only to be rewritten in independent form and the remaining claims have been amended to more clearly define the invention. Support for the amendments can be found in the original application, as filed. No new matter has been added.

In the Office Action, claims 1, 4, 7, 10, and 13-22 were rejected under 35 U.S.C. § 103 as unpatentable over U.S. Patent No. 5,749,024 to Young in view of U.S. Patent No. 5,481,353 to Hicks et al., and claims 2, 3, 5, 6, 8, 9, 11, and 12 were rejected under 35 U.S.C. § 103 as unpatentable over Young in view of Hicks et al., and further in view of U.S. Patent No. 5,282,050 to Ishizuka et al. Applicants respectfully traverse these rejections.

Applicants' Invention

As amended herein, claim 1 now recites a printing control method of controlling, from a host computer, a printing device to output printing data onto a printing medium. The method includes a print setting step, a separation printing check step, a printing order check step, and a control step. Among other features of this claim, the print setting step sets, *based on a user input via a graphical user interface provided by a printer driver*, a separation printing setting and a printing order setting for a print job, wherein the printing order setting represents whether the printing data is output from a final page or from a first page.

Independent claims 7 and 13 recite a printing control apparatus for remotely controlling a printing device to output printing data onto a printing medium and a storage medium storing a program which can be executed by a printing control apparatus for remotely controlling a printing device to output printing data onto a printing medium, respectively. The apparatus of claim 7 and the program of claim 13 generally correspond to the method of claim 1.

Independent claim 14 recites a printing control method including a checking printing settings step and a determining step. The checking printing settings step checks printing settings including whether a plurality of different media are to be output for each page of data and which one of face-up printing and face-down printing is to be performed. The determining step determines an output order of the plurality of different media based on which one of face-up printing and face-down printing is to be performed. The printing settings are set using a graphical user interface provided by a printer driver before a printing operation, and are set with respect to individual print jobs.

Independent claims 17 and 20 recite a printing control apparatus and a computer-executable program code stored on a computer-readable memory medium, the computer-executable program code for controlling printing, respectively. The apparatus of claim 17 and the program code of claim 20 generally correspond to claim 14.

Independent claim 2 is previously-presented dependent claim 2, rewritten in independent form. According to claim 2, a printing control method of controlling a printing device to output printing data onto a printing medium includes a print setting step, a separation printing check step, a printing order check step, a saving state check step, and a saving function invalidating step. Among other features, the printing setting step sets, based on a user input to a graphical user interface, a separation printing setting and a printing order setting for a print job, the separation printing check step checks the separation printing setting representing whether a predetermined medium is additionally

output over each printed page of the printed data, the saving state check step checks whether the printing device is set to a saving state in which a page having no output data is not output, and the saving function invalidating step invalidates setting of the saving state when setting of additionally outputting the predetermined medium is detected in the separation printing check step and setting of the saving state is detected in the saving function check step.

Independent claim 3 is previously-presented dependent claim 3, rewritten in independent form. According to claim 3, a printing control method of controlling a printing device to output printing data onto a printing medium includes a print setting step, a separation printing check step, a printing order check step, a saving check step, and a saving function invalidating step. Among other features the printing setting step sets, based on a user input to a graphical user interface, a separation printing setting and a printing order setting for a print job, the separation printing check step checks the separation printing setting representing whether a predetermined medium is additionally output over each printed page of the printed data and checks a layout paper printing setting, set in advance, representing whether a predetermined content is printed on the predetermined medium, the saving state check step checks whether the printing device is set to a saving state in which a page having no output data is not output, and the saving function invalidating step invalidates setting of the saving state when the separation printing setting is set to additionally output the predetermined medium, and the layout paper printing setting is set off.

Independent claims 8 and 9 are apparatus claims that generally correspond to independent claims 2 and 3, respectively.

Thus, from the foregoing, as recited in each of independent claims 1, 7, and 13, a printing device is controlled from a host computer (claim 1) or remotely (claims 7 and 13) to output printing data onto a printing medium by, among other features, setting a

separation printing setting and a printing order setting for a print job based on a user input via a graphical user interface, wherein the printing order setting represents whether the printing data is output from a final page or from a first page.

According to claims 14, 17, and 20, printing settings are set using a graphical user interface provided by a printer driver before a printing operation, and are set with respect to individual print jobs, wherein the printing settings include which one of a face-up printing and face-down printing is to be performed.

Furthermore, among other features, claims 2 and 8 each recite setting, based on a user input to a graphical user interface, a separation printing setting and a printing setting for a print job, checking whether a printing device is set to a saving state in which a page having no output data is not output, and invalidating setting of the saving state when a setting of additionally outputting a predetermined medium is detected and setting of the saving state is detected.

Finally, among other features, claims 3 and 9 each recite setting, based on a user input to a graphical user interface, a separation printing setting and a printing setting for a print job, checking whether a printing device is set to a saving state in which a page having no output data is not output, and invalidating setting of the saving state when a separation printing setting is set to additionally output a predetermined media and a layout paper printing setting is set off.

Discussion of the Cited Art

Applicants submit that Young, Hicks et al., and Ishizuka et al. fail to teach or suggest at least the salient features of the invention discussed above, whether those patents are taken alone, or in combination.

Young relates to a printing system for printing transparency sheets with sheets of paper interleaved therebetween. The Office Action concedes that Young does not

explicitly teach at least setting a separation printing setting and a printing order setting for a print job based on a user input via a graphical user interface provided by a printer driver, as recited in claims 1, 7, and 13; setting printing settings using a graphical user interface provided by a printer driver, as recited in claims 14, 17, and 20, or setting a separation printing setting and a printing order setting for a print job based on a user input via a graphical user interface, the saving state check steps/means, and the saving function invalidating steps/means recited in claims 2, 3, 8, and 9.

Applicants submit that the Hicks et al. and Ishizuka et al. patents also fail to teach at least these features.

Hicks et al. relates to an apparatus for producing variable feature presentation sets. In this patent, transparencies are interleaved by dividers or a master set whenever either the divider or the master set are to be printed. Although Hicks et al. discloses a user interface for setting interleaving printing, Hicks et al. is not understood to teach or suggest at least using a graphical interface provided by a printer driver to set 1) a printing order representing whether printing data is output from a final page or from a first page, as recited in claims 1, 7, and 13, or 2) printing settings including which one of face-up printing and face-down printing is to be performed, as recited in claims 14, 17, and 20. Nor is that patent understood to teach or suggest that a user interface is used to set a printing order representing whether printing data is output from a final page or from a first page, as recited in claims 2, 3, 8, and 9. Instead, Hicks et al. instructs that “[t]he system may sort the sequenced outputs into a single stack (*face up or face down, depending on the printer/sorter employed*).” Col. 8, ll. 25-28 (emphasis added). This disclosure thus teaches that a printing order and print settings are not set based on an input to a user interface, as recited in the independent claims, but based on the printer/sorter that is used. Moreover, Applicants submit that the user interface of Hicks et al. is part of the printing device, and is

thus not provided by a printer driver, as now recited in independent claims 1, 7, 13, 14, 17, and 20.

Ishizuka et al. relates to a dual-side recording apparatus. Column 5, lines 49-54, of that patent discloses an operation in which pages are determined to be ineffective pages if a counted number of changed pixels of image data is smaller than a predetermined value, and ineffective pages are not recorded. Ishizuka et al. is only understood, however, to teach turning this operation on or off. Nowhere does Ishizuka et al. teach or suggest 1) checking whether a printing device is set to a saving state in which a page having no output data is not output, and invalidating setting of the saving state when a setting of additionally outputting a predetermined medium is detected and setting of the saving state is detected, as recited in independent claims 2 and 8, or 2) checking whether a printing device is set to a saving state in which a page having no output data is not output, and invalidating setting of the saving state when a separation printing setting is set to additionally output a predetermined media and a layout paper printing setting is set off, as recited in independent claims 3 and 9.

Conclusion

For the foregoing reasons, Applicants submit that all of the independent claims are patentable over the cited patents, whether those documents are taken alone or in combination. In particular, Applicants note that claims 2, 3, 8, and 9 have been amended only to be rewritten in independent form, and the remaining claims have been amended only to more clearly define the invention. Favorable reconsideration and withdrawal of the rejections to those claims are respectfully requested.

The remaining claims depend from one of the independent claims, and are believed allowable by virtue of that dependency, and for reciting other patentable features

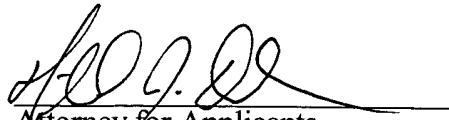
of the invention. Favorable and independent consideration of the dependent claims are requested.

Applicants further submit that this Amendment After Final Rejection clearly places this application in condition for allowance. This Amendment was not earlier presented because Applicants believed that the prior Amendment placed the application in condition for allowance. Accordingly, entry of the instant Amendment, as an earnest attempt to advance prosecution and reduce the number of issues, is requested under 37 CFR 1.116.

Favorable reconsideration, withdrawal of the rejections as set forth in the above-noted Office Action and an early Notice of Allowance are also requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "M. J. Didas", is written over a horizontal line.

Attorney for Applicants
Michael J. Didas
Registration No. 55,112

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200
MJD/ksp

DC_MAIN 175797v1